

(April 1, 2002)

Bolts

Section 9-06.5 is supplemented with the following:

In lieu of the metric bolts, nuts, and washers specified, the Contractor may substitute English bolts, nuts, and washers, subject to the following conditions:

1. The substitution shall apply to all bolts, nuts, and washers furnished for the project. The Contractor shall not mix English and metric fasteners and hardware.
2. The English fasteners and hardware shall conform to the English AASHTO or ASTM material specification equivalent to the specified metric material specification.
3. The Contractor shall identify the material substitution on all shop plans submitted to the Engineer for approval, and on all Manufacturer's Certificate of Compliance submitted to the Engineer.
4. The Contractor shall make the substitution at no additional cost to the Contracting Agency.
5. The equivalent English unit hole size (standard, slotted, and oversize), and minimum spacing and edge distance dimensions, shall conform to the current editions of either the AASHTO Standard Specifications for Highway Bridges, or the AASHTO LRFD Bridge Design Specifications as appropriate for the design criteria specified in the Plans. Where the design criteria is not specified in the Plans, the provisions of the AASHTO Standard Specifications for Highway Bridges shall control.
6. The substitutions shall conform to the following table:

Metric Bolt Diameter in Plans		Equivalent English Bolt Diameter	
Bolt	Std. Hole for High Strength Bolts (mm)	Bolt	Std. Hole for High Strength Bolts (inches)
M5	N/A	3/16	N/A
M6	N/A	1/4	N/A
M8	N/A	5/16	N/A
M10	N/A	3/8	N/A
M12	N/A	1/2	N/A
M14	N/A	9/16	N/A
M16	18	5/8	1 1/16
M20	22	3/4	1 3/16
M22	24	7/8	1 5/16
M24	26	1	1 1/16
M27	29	1 1/8	1 3/16

M30	32	1 1/4	1 5/16
M36	38	1 1/2	1 9/16

For anchor bolt diameters not covered by the table, the Contractor shall convert the metric diameter shown in the Plans to inches and furnish the anchor bolt in the nearest equivalent English diameter.